

Application No. 10/826,096

Response to Office Action Mailed 06/12/2006

REMARKS

Claim Objections

Paragraph 1 of the Detailed Action objects to Claim 5 because of ambiguity as to which weight is being referred to by "the weight" in line 2 of the claim. In response, Claim 5 is being amended by clarifying that this weight is the "permanent weight."

Rejections of Claims 1-3, 6, and 8 - 35 USC §103

The Detailed Action, in Paragraphs 3-8 rejected Claims 1-3 under 35 U.S.C. 103(a) as being unpatentable over Dantolan (US Pat. No. 5,474,511) in view of Buchner (US Pat. No. 3,761,083) and Hamilton (US Patent No. 5,312,308). Buchner's device has stationary and slidable handles and springs, but no weights and no shock absorbing means. Buchner refers to the springs as providing resistance in compressive types exercises illustrated in Figs. 2-7 and discussed at Col. 1, lines 20-34. Buchner nowhere discusses the springs as having a shock absorbing function. The Detailed Action introduces Hamilton as evidence that springs inherently function as a shock absorbing means. Applicant does not deny that springs may have shock absorbing uses. In fact, in Claims 8 and 9, Applicant uses springs as a shock absorbing means. However, a spring could also assist rather than resist the momentum of a weight. As discussed in paragraph [0004] objectives of the instant invention are preventing a stationary handle from leaving the apparatus and protecting a stationary handle (and user's hand) from shock should a slidable handle be let loose of. From paragraph [0014], a user grasps handles and moves the tube back and forth in a direction parallel to its length. If the user loses control, the motions of the springs and the weight could become unsynchronized with a spring increasing rather than resisting momentum of the weight, uncontrolled exercise device becomes a thing of danger that might cause injury to the user or damage to property. Buchner's device is designed to put springs under compression but without the side-to-side motion (reciprocation) of the device that the instant invention is designed for. Therefore Buchner's device has no need for shock absorption. Also Hamilton's device is not designed for reciprocation. The combination Buchner's and Dantolan (511)'s devices

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are subject to the same risks of harm as user of Dantolan (511)'s device.

Claim 1 has been amended to incorporate the limitation of swaging from Claim 2. Therefore Claim 2 has been canceled. Paragraph 8 of the Detailed Action asserts that swaging is an obvious design choice and does not provide any evidence supporting the assertion. Applicant respectfully disagrees. An important consideration in the design of goods are the costs of manufacturing. Buchner (Col. 1, lines 11-12) cites as one of the objects of his device that it is relatively easy and inexpensive to manufacture. There are many difficulties associated with swaging. For instance, there are no standard swaging machines available. Machines have to be built from scratch to fit particular applications. For example, Dantolan in U.S. Patent No. 6,228,002 B1 describes (Col. 2, lines 44-64) the swaging machine needed for manufacturing his rotatable weight exercise machine. The metal tubes must have the necessary tensile strength appropriate or commensurate with the particular swaging involved. Steel tubing that is too soft will cause the tube to split and steel tubing that is too hard will bend at weak points rendering the tubes unusable and unsalvageable. Other problems in tube swaging include welded tube seams being subject to splitting as well. From this discussion it is readily seen that swaging adds materially to the cost of manufacture because it requires extra machining of the tube 10 and sleeves 41 and 46 and likely also requires specially built machines. With the current emphasis on cost efficiency and because of the extra costs and manufacturing complexities associated with swaging, Applicant believes that swaging is not an obvious design choice.

Keeping the stationary handles secured to the tube under normal operations can be accomplished by using stock handles available for this purpose. Such stock handles would be the obvious choice. The value of swaging the ends of the tube is that it prevents the metal bushings 60 and 65 (see Fig. 5) from making contact with the stationary handles. Should a metal bushing make contact with a stationary handle, the momentum of sliding sleeves 41 and 46 would be transmitted to the metal bushing forcing the stationary handle and all slidable components to move off the end of the tube with obvious risks to the user and property. This benefit of swaging would not be

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obvious from devices without shock absorption and bushings, such as Buchner's. Because of the safety benefits provided by swaging the ends of the tube, Claim 1 is amended to incorporate this limitation.

The invention also teaches and claims (Claim 3) swaging the ends 42 and 47 of the slidable metal sleeves 41 and 46 in Fig. 5. This swaging will prevent the sliding handles 40 and 45 and washers 43 and 48 from leaving the sliding metal sleeves. By so doing this swaging prevents the stationary end handles from being forced off the tube by the impulse from loose sliding metal sleeve handles and washers.

Incidentally, the Office Action states in Paragraph 5 that Dantolan (511) does not disclose stationary handles or shock absorbing means on each end of the tube. Actually, the embodiment shown in FIG. 1 and discussed in Col 2, lines 4-23 has fixed handles and flanges attached to the fixed handles. The flanges protect a user's hands from being entwined in a coil and crushed by the weight. However, the flanges would not absorb shocks but would rather transmit them. Therefore, the flanges would not prevent a shock from excessive momentum to cause a user from losing his grip on a handle.

The combination of Buchner and Dantolan (511) do not provide protection to a user's hand and to protection from a stationary handle leaving the device should non-synchronized motion of the springs and weight(s) cause the springs to assist, rather than resist momentum of the weights. Therefore the combination is unsatisfactory when used as a reciprocating device. . MPEP 2143.01, page 2100-131 (Rev 2, May 2004) provides in boldface "THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE." If the prior art is rendered unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the modification, and a criterion for a *prima facie* case of obviousness is not met. Therefore, the rejection of amended Claim 1 is believed to be traversed.

MPEP, 2143.03, page 2100-133 (Rev. 2, May 2004) provides that if an independent claim is nonobvious under 35 U.S.C. 103, then any claim dependent therefrom is also nonobvious. Rejected Claims 3, 6, and 8 are directly or indirectly dependent on Claim 1. Therefore, Applicant believes that the rejection of Claims 3, 6,

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and 8 are also traversed as these claims are dependent on Claim 1 and the rejection of Claim 1 is believed to be traversed.

Applicant also believes that the metal bushing 60 and 65 claimed in Claims 6 and 8 are non-obvious. They act not only as shock absorbers but also as intermediaries between the sliding metal sleeves and the swaged ends of the tube. This use as intermediaries is believed to be non-obvious. The intermediary bushings are used for the close tolerances that exist between the sliding metal sleeve's inside diameter and the gradual expansion of the swaged tube end. If the intermediary bushings were not used, there could be binding and/or locking together of the sliding metal sleeves to the start of the expansion portion of the swaged tube end making the mechanism inoperable. Also, it should be noted that if the metal bushings were not used, the end buffer springs 90 and 95 would be rendered inoperable. This is because during normal use the sliding metal sleeves making contact pressure with the buffer springs will force the buffer springs to be compressed lengthwise and expand in diameter. This, in turn, will cause the buffer springs to ride onto and over the swaged ends of the tube forcing the buffer spring and the stationary end handles to leave the tube.

Rejection of Claim 10 -35 USC 103

In Paragraphs 17-21 of the Detailed Action. Claim 10 was rejected as being unpatentable over Wilmoth et al. US Patent No 3,938,803) in view of Dantolan (511). In a previous office action, Claims 4, 5, 7, and 9 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Claim 4 was canceled and replaced by new, independent Claim 10, which has all of the limitations of Claims 1-4.

The basic limitation added in Claim 10 is auxiliary weight attached on opposite sides a permanent weight. The Detailed Action in Paragraph 18 characterizes Wilmoth et al's elements 11 and 12 as auxiliary weights. Applicant believes that this characterization is unsupported by their teachings. Fig 1 shows elements 11 and 12 at

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being located approximately at the midpoints of tubular, sideable elements 7 and 8, respectively. Wilmoth et al identify elements 7 and 8 as "wheeled grips" (e.g., Col. 2, line 17) and the elements 11 and 12 as "wheels." In the claim in Col 4, lines 6-8, the wheels are referred to as follows: "...a pair of wheels, and means rigidly securing one of said wheels to each of said sleeves....." Thus the wheels are rigidly attached to the sleeves, or wheeled grips." As described in Col. 1, lines 32-36, the combination allows the device to be rolled for certain exercises. Applicant could not find where Wilmoth et al refer to the wheels are "weights." As shown in Figs. 2 and 3, the wheels contain holes 10 that reduce their weight.

Paragraph 21 of the Detailed Action asserts that it would be obvious to attach the wheels of Wilmoth's device to opposite sides of the permanent weight of Dantolan's device and thus act as the auxiliary weights. MPEP 2143.01, page 2100-131 (Rev 2, May 2004) provides in boldface "THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE." If the prior art is rendered unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the modification, and a criterion for a *prima facie* case of obviousness is not met. Wilmoth's wheels are rigidly attached to the wheeled grips, the equivalent of Dantolan's sliding handles. Paragraph 21 of the Detailed Action suggests attaching the wheeled grips to the permanent weight. Then one would have as a unit, a wheeled grip, the permanent weight, and the second wheeled grip. Wilmoth et al (Col. 2, lines 57-66) describes using their device as a compression device by pushing the wheeled grips inward. Similarly the instant device could be used in this way. However, the combination cannot because the slidable handles (wheeled grip) could not be moved inward toward each other because they are attached together. The combination would be unwieldy to hold and would severely limit the kinds of exercises that can be performed and is therefore unsatisfactory. Consequently the basis for rejecting claim Claim 10 is traversed.

Allowable Subject Matter

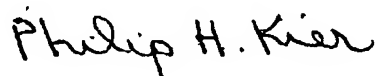
In Paragraph 22 of the Detailed Action, Claims 5, 7, and 9 were objected to as

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being dependent upon a rejected base claim (Claim 10), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Claim 11 has been added which adds the limitations of Claim 5 to the limitations of Claim 11. Also, Claims 12 and 13 have been added with the limitation of Claim 7 and Claim 9, respectively being dependent on Claim 11 instead of rejected Claim 10.

Respectfully submitted,



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